



2040

Metropolitan Transportation Plan

Executive Summary



**Greensboro
Oak Ridge
Pleasant Garden
Sedalia
Stokesdale
Summerfield
Guilford County**



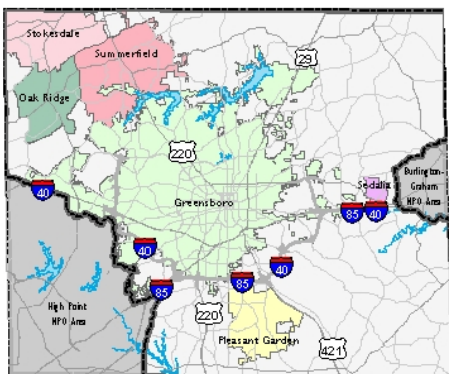
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Introduction and Vision

This executive summary contains highlights of the 2040 Metropolitan Transportation Plan. It is arranged in the same order as the full plan, with selected maps and tables included. For more details and larger maps, you may download the full plan at www.guampo.org. All recommendations are in the final section of this summary, the Action Plan, rather than with individual sections. The intent of this document is to provide an easy-to-read summary and to highlight key findings or recommendations.

The 2040 Metropolitan Transportation Plan addresses surface transportation, including highways, railways, public transit, bicycling, and pedestrians, as well as intermodal connections and connections to aviation. It covers the Greensboro Metropolitan Area including the City of Greensboro, the Towns of Pleasant Garden, Oak Ridge, Sedalia, Stokesdale, Summerfield, and much of unincorporated Guilford County (shown in Map 1-1)—an area estimated to include 612 square miles and a population of 385,149 (2013 estimate). Greensboro, the center city, is the 3rd most populous city in North Carolina and the 68th in the United States, according to the 2013 Census.



The plan provides an assessment of future area transportation needs, issues and recommendations, along with future transportation investment recommendations. The plan is scheduled for adoption by the Greensboro Urban Area Metropolitan Planning Organization (MPO) in September 2015. The document serves as a resource for area local governments and the NCDOT and will fulfill federal requirements for the Long Range Transportation Plan.

The Vision

The 2040 Plan succeeds the previous 2035 Plan adopted in January 2013. The 2040 Plan updates the framework using new tools and data, additional analysis, and additional public involvement activities. The 2040 Plan vision is listed below:

To develop and maintain a safe, efficient, and environmentally compatible transportation system that provides convenient choices for accessing destinations throughout the Greensboro Metropolitan Area and the Triad, including well-integrated, connected public transportation, pedestrian, and bicycle networks.

This vision reflects the need for a balanced transportation system that provides a range of convenient transportation choices, with strong support for: strategic investment in the highway system, expanded pedestrian and bicycle facility networks, and enhanced and expanded public transportation services.

Federal Requirements

The MTP incorporates a wide range of federally mandated analyses and process steps. New surface transportation authorization legislation known as Moving Ahead for Progress in the 21st Century (MAP-21) was enacted July 6, 2012. MAP-21 requirements for the MTP are very similar to the previous transportation authorization, SAFETEA-LU, including the addressing of eight planning factors, analyses of future conditions on the transportation system and air quality analysis, and a fiscally constrained financial plan. The eight planning factors listed below overlap with the key goals of the plan. Promoting the planning factors is a primary goal for the MTP.

- ☞ Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;

- Increase the safety of the transportation system for motorized and non-motorized users;
- Increase the security of the transportation system for motorized and non-motorized users;
- Increase accessibility and mobility of people and freight;
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- Promote efficient system management and operation; and
- Emphasize the preservation of the existing transportation system.

Public Involvement Process

For general public involvement efforts related to the 2040 Metropolitan Transportation Plan (MTP), the Greensboro Urban Area MPO followed its Public Participation Plan (PPP, available at www.guamapo.org). The PPP is a flexible framework developed in consultation with stakeholders and members of the public for public participation on all MPO plans and studies.. Participation efforts will detailed in Appendix B of the final plan.

During development of the document, public involvement included a public review in February 2014. Publicity included newspaper ads, press releases, e-mail notices, and a newsletter.

Land Use and Transportation

The Land Use and Transportation connection is an important consideration for the 2040 MTP. Federal law requires the MTP to be consistent with current land use and to account for future land use trends. To ensure consistency, the 2040 Metropolitan Transportation Plan was developed using a study detailing existing and expected socio-economic and land use trends. The future socio-economic data was developed for the Triad Region by a team with a diverse background in transportation planning, land use planning, and business.

Safety and Security

The previous transportation authorization, SAFETEA-LU, expanded the number of planning factors from seven to eight by splitting safety and security into two separate factors. The factors “*increase the safety of the transportation system for motorized and non-motorized users*” and “*increase the security of the transportation system for motorized and non-motorized users*” continue to be emphasized in MAP-21. MAP-21 emphasizes safety with directed funding for infrastructure safety, improving connections among modal safety programs, and creating an agenda to significantly reduce highway fatalities.

The MTP details linkages to the North Carolina Strategic Highway Safety Plan and incorporates the goal to reduce the number of fatalities and to decrease the economic impact from highway-related accidents. The MTP notes specific recommendations and actions for bicycle and pedestrian safety, vehicular traffic safety, transit safety, and freight safety. An important commonality across these areas is the need for ongoing and proactive coordination between transportation, operations, emergency management, and law enforcement agencies.

The goal of the NC Strategic Highway Safety Plan is to reduce the number of fatalities and serious injuries from highway related accidents. North Carolina has set a goal to reduce fatalities and serious injuries over the next 30 years. The table below from 2014 Strategic Highway Safety Plan shows a decline in annual fatalities starting in 2013.

Goal Year	Annual Lives Saved*	Serious Injuries Prevented*
2015	75	125
2020	260	435
2025	445	745
2030	630	1,055

**Relative 2013*

The MTP addresses security through discussions of the national Strategic Highway Network (STRAHNET), local and NCDOT infrastructure data security measures, as well as a summary look at transit security measures. Transit security measures include cameras, security personnel, and a police substation at the Depot, and plans to expand the use of cameras and automated vehicle locator technology system-wide. Secure bicycle parking is also addressed. Additionally, the need for continued coordination with the area disaster planning process and Metro 9-1-1 service are strongly recommended.

Roadways

The Greensboro Urban Area transportation system plays an integral role in promoting economic vitality, quality of life, and community through the movement of people and goods. The roadway network serves as a basis for the implementation of alternative modes of transportation, such as bicycling and walking. MAP-21, states that the Metropolitan Transportation Plan (MTP) should be updated to validate and ensure consistency with existing and future transportation conditions. Considerable efforts were made in evaluating existing and future roadway networks and improvements.

The roadway analysis is a foundation for several types of roadway plans. Each plan serves a different purpose, but is based upon the same technical analysis. The plans include the Thoroughfare Plan, Comprehensive Transportation Plan, Collector Street Plan, and the MTP Recommended Highway Plan. Primary discussion focuses on the MTP Recommended Highway Plan, but also includes discussions of the first three plans. The Recommended Highway Plan meets MAP-21 requirements by identifying existing and future transportation improvements to address the demands of people and goods through 2040.

MTP Recommended Highway Plan

The MTP Recommended Highway Plan shows improvements from 2016 through 2040 based upon technical and fiscal analysis. The Plan is different from the others mentioned above because it is financially constrained, per federal requirements. This means the MPO must identify a reasonably foreseeable funding plan for project construction. In addition the Plan also includes projects recently completed between 2009 and 2015.

Project Recommendations

Project Recommendations for the 2040 MTP are based on an extensive technical and financial analysis of the Urban Area transportation system. The analysis indicates over \$1.6 billion in highway investments will be needed to meet future travel demand through 2040.

Recommended projects range from short term implementation to long range conceptual projects for further consideration. Some projects in the earlier horizon years have completed the project development process

and are ready for construction. Projects listed in the later years, especially 2040, are often more conceptual in nature and have not entered the project development process.

A detailed listing of the project recommendations are shown in **Figures 4-6 through 4-10**. Each figure is followed by the corresponding **Maps 4-4, 4-5, 4-6, 4-7, and 4-8** depicting the projects for each horizon year. The listing is a combination of projects with state, federal, and local funding. The NCDOT's Transportation Improvement Program (TIP) is expected to fund the state and federal projects while Greensboro's 2000 and 2008 Transportation Bond and future transportation bonds will help fund the local or candidate projects. The projects are ordered within the horizon years 2021, 2030, or 2040. The projects shown from 2013-2015 reflect recently completed projects. A listing of illustrative projects is also included. This list represents projects that may need to be constructed in the future, but are not a current priority for obtaining funding. The projects are not included in the financial analysis and therefore are not eligible to receive State or Federal funds. The phasing of the projects is based on actual project commitments, project development status, the anticipated future project schedule, and ultimately on the need to balance costs and revenues. Each project listing includes:

- Map ID (use to identify projects on maps)
- Funding Type or Source
- TIP or Local (bond) ID
- Facility
- Project Description (describes extent of project)
- Length
- Existing # Lanes (current number of lanes)
- Horizon Year # Lanes (proposed lane improvements)
- BiPed (notes whether the project includes accommodations for bicycles and/or pedestrians)

An exemption category has been included for each horizon year. The exemption allows projects to proceed to construction in the absence of a conforming transportation plan and TIP.

Transit

Public transportation provides mobility choices to everyone but is especially important to older adults, students, those without private automobiles, persons with physical or mental impairments, and those who are economically disadvantaged or otherwise burdened by the high cost of operating an automobile. Transit is an efficient, low-cost, high-capacity means of moving people through the area, including on densely traveled corridors. Public comments to the MPO on the 2040 MTP reflect the fact that improved transit services are widely seen as a key element of the area's future transportation system.

The **goals** of the public transportation element, listed below, reflect these needs. A well-integrated, connected public transportation network

- Provides mobility to the transit-dependent (those with few or no other travel choices),
- Ensures that transportation is not a barrier to accessing employment, services, or other needs,
- Provides travel choices to the community and the region,
- Mitigates growth in traffic congestion,
- Contributes towards improved air quality and reduced dependence on fossil fuels, and
- Supports livable, compact patterns of development.

Policy recommendations and action items for public transportation are included in the Action Plan section of this document.

Greensboro Transit Authority

Recommendations for investments in public transportation are based on the *GTA Short-Range Transit Service Plan* and relevant elements of *Mobility Greensboro*. PART's *Regional Transit Development Plan* was also consulted. Analysis focuses on GTA and PART because they are the major providers of fixed-route local and regional transit in the MPO area.

From 2001 to 2014, GTA's annual ridership grew by 160% to over 4.8 million unlinked passenger trips. GTA and the City of Greensboro will need to maintain existing service levels, improve passenger facilities such as sidewalks and bus stops, and begin to provide better information to its passengers including real-time traveler information to continue ridership growth and meet travel demand. Then, GTA and the City will need to continue extending routes to activity centers, install cross town services, and phase in higher frequency quality routes on its most productive corridors.



Accordingly this plan projects a series of new services supported by an increase in GTA's fixed route-bus fleet by 70% by 2040: an increase from 57 to 97 buses. The expansion bus numbers are based on the proposed new services. **Map 5-2** shows these improvements. Note the actual timing of service expansions will depend on the availability of revenues between now and 2040. Also, locations of new routes are conceptual and may be adjusted before implementation.

By 2021 (or as feasible; these are short-term priorities):

Split route 12 to create routes for both the Elm-Eugene and Randleman Road corridors.

Replace Sunday Service with regular weekday routes and schedules

By 2030:

Route 15 Service Enhancement to 30 minutes (this route created with an infusion of local funding in 2008 currently operates on a 60 minute headway).

Crosstown: Holden

Crosstown: New Garden – Guilford College Road

Willow - English

Crosstown: Florida

Crosstown: West Market Street

Crosstown: Cone

Crosstown: Pisgah Church – Lees Chapel Road

Frequent Service Route: High Point Road

By 2040:

Crosstown: PTI

Frequent Service Route: Route 12 Randleman

Frequent Service Route: Route 8 Battleground Avenue

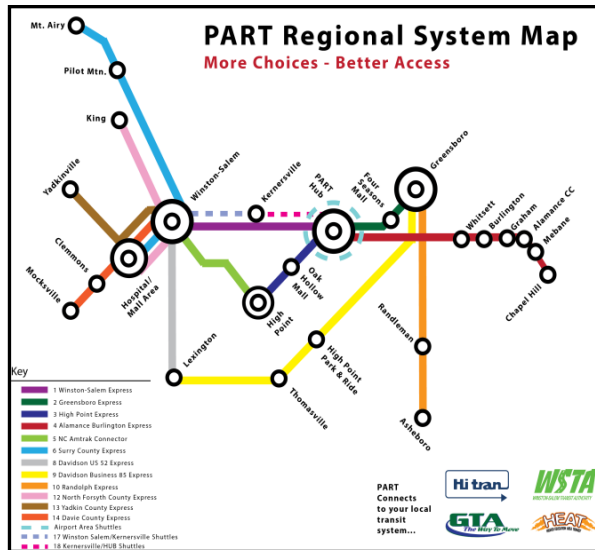
Frequent Service Route: Route 1 Spring Garden/W. Wendover

Frequent Service Route: Route 6 Summit Avenue

Frequent Service Route: Route 10 East Market Street

Piedmont Authority for Regional Transportation

The MTP assumes that PART will continue to operate its regional bus service through 2040 at current levels with minor expansions.



The first priority is to restore services cut in 2011, 2012, and 2013. The MTP assumes this will occur by the end of calendar year 2016. In addition to seeking operating efficiencies PART will seek local funds, any available FTA Section 5307 and 5311 funds from NCDOT, and possibly CMAQ grants to enable service restoration. In addition, PART will work directly with transit systems in the region to establish a Mobility Management or Regional Call Center for the Triad. Planning for the implementation of a mobility management call center began in 2014 and PART has developed the space to accommodate the Regional Call Center. The cost associated with this project will be associated with personnel needed to perform the call taking and scheduling functions. A tentative opening date for the center is August 2015.

PART's second priority is completing its intermodal passenger transfer and bus maintenance facility in Greensboro. PART received Section 5309 Earmark under SAFTEA-LU to acquire the property and design the facility. They were able to keep the grant active through procedural maneuvers made possible by working with FTA. The grant was approved and the groundbreaking was held May 13, 2015 for the new Intermodal Transportation Center. A total budget for upcoming construction is established at \$11M. Preliminary design is completed and construction is estimated to begin in mid-2015 with a completion data of late 2016. PART also plans to establish a new limited weekend service to compliment the services operated by the urban operators.

The PART TDM / Vanpool Program has shown steady growth during FY2012. PART anticipates overall fleet expansion to accommodate vanpool growth during FY2014-2017 for the vehicle purchases, as well as regular vehicle replacements through 2040 to support the Regional Program.

PART's vision is to establish several service enhancements during the next twenty years. These enhancements will be subject to the establishment of a locally dedicated fund source and greater participation from its member counties.

Bicycle and Pedestrian

Improving conditions and safety for bicycling and walking embodies the spirit and intent of MAP-21 and its predecessors, SAFETEA-LU, TEA-21, and ISTEA. One of the goals is to create an integrated, multimodal transportation system that provides travelers with real alternatives of transportation modes. State and local agencies are challenged to work together cooperatively with transportation providers, user groups, and the public to develop plans, programs, and projects which reflect this vision.



BiPed Plan

The MPO partnered with the Greensboro Departments of Transportation and Parks & Recreation, Guilford County Planning and Health Departments, University of North Carolina Greensboro, NCDOT and a host of local associations to develop the Greensboro Urban Area Bicycle, Pedestrian and Greenway Master Plan. The plan was adopted by the MPO in October 2006, Greensboro City Council in December 2006, the Guilford County Board of Commissioners in June 2007, and by the Town of Oak Ridge in January 2008. During the public participation process, the plan became known as “BiPed” and was branded with its own logo.

Safety Program

As a part of the annual safety program, the Greensboro Department of Transportation (GDOT) reviews all crashes involving pedestrians and bicycles. Review of historic crash data identifies streets and locations that have numerous pedestrian or bicycle crashes. Once these locations are identified, field investigations are conducted and possible improvements implemented. These improvements include enhanced crosswalk markings and signs, refuge islands, ‘In-Street Pedestrian Crossing’ signs, and possibly traffic calming measures. All strategies are meant to increase driver’s awareness of pedestrians and bicycles. Educational materials on pedestrian and bicycle safety, as well as safety items such as flashing lights, are made available to the public through the website and at all public meetings.

Bicycle and Pedestrian Improvements

The City of Greensboro has initiated an aggressive sidewalk construction program in an effort to infill high priority locations. The City currently has 81.2 miles of independent sidewalk projects that are expected to be constructed by 2021. An additional 18.7 miles of roadway projects with sidewalks are expected to be constructed within this time frame. Assuming currently anticipated federally funded projects are completed and future bond referenda include significant bicycle & pedestrian facility funding, it is estimated Greensboro will complete 168 miles of independent sidewalk projects by the 2030 horizon year and an additional 36 miles by the 2040 horizon year.

The City of Greensboro has almost 12 miles (centerline) of bicycle lanes on various city streets. With the BiPed Update, many new streets were reviewed to determine their feasibility for adding bicycle accommodations. An implementation step for the BiPed Update is to develop a program to expedite bicycle facility projects and install more than 50 centerline miles of bicycle lanes over the next five years. These include traditional bike lanes and new facilities such as protected bike lanes and buffered bike lanes.

Within the Greensboro MPO there are 37 miles of public greenways and 75 miles of public natural surface trails for a total of 112 miles of off-road paths. The BiPed Plan recommends over 460 miles of new facilities and identifies tiers for prioritization purposes.

Maintenance of the existing system is extremely important to accommodate all users and to preserve infrastructure from premature obsolescence and deterioration. This includes operational evaluation of signage, markings, lighting and signals to ensure they are meeting current needs. It also includes repaving and reconstruction of deteriorated sidewalk, roadway, and greenway surfaces.

The MTP Bicycle and Pedestrian Element is a fiscally constrained plan drawing from the BiPed Plan. MTP assumptions include:

- ✦ Local bonds or other revenue will support continuing implementation of road, sidewalk, and trail projects.
- ✦ Federal funds will be made available for continuing investment by the MPO and its local government partners in the bicycle and pedestrian system over the life of the plan.

Freight

The Burlington-Graham, Greensboro, High Point, and Winston-Salem Metropolitan Planning Organizations (MPOs) are undertaking a Regional approach to the Metropolitan Transportation Plan (MTP) to develop a framework for an integrated freight planning document in their respective areas.

Over the last several years, the Piedmont Triad has become increasingly focused on freight transportation planning since the loss of textile manufacturing and a shift to major Freight and Goods Movement Industry. The goals guiding regional freight planning and investment are:

- Provide a safe *freight* transportation system that sustains or improves existing levels of freight access and mobility;
- Support the region's economic well-being, while remaining sensitive to environmental needs and concerns; and
- Achieve efficiency in operations and investments in the *freight* transportation system.



Freight movement is critical to an advanced industrial economy and the ease of freight movement is fundamental to a region's economic competitiveness.

The NC Maritime Strategy report (AECOM; URS, 2012) shows that trucks carried 82.4% of freight traffic in North Carolina in 2007, while rail carried 13.6%. The analysis predicts that by 2040 the total truck freight carried will increase to 85.18% while the rail freight will decrease to 10.16%.

Travel Management Strategies

The MTP seeks to support travel demand management goals, which center on transportation demand rather than supply (roadway capacity). Such strategies typically focus on roadways with recurring or non-recurring traffic congestion. The Travel Management chapter outlines existing and potential future management

strategies in the MPO area, including network monitoring, performance measures, and specific management strategies. This chapter also includes a brief discussion of asset management processes.

The MPO's Congestion Management Process (CMP) is closely tied to its management strategies. Transportation regulations state that the CMP should result in multi-modal system performance measures and strategies that can be reflected in the MTP. The CMP is an initial step towards a more systematic implementation of management strategies throughout the Greensboro Urban Area. The analysis and recommendations of the CMP have been closely coordinated with those of the MTP to ensure consistency in implementation.

Environmental Analysis

Analysis of the impacts of transportation projects on communities and the natural environment has long been an element of project development, environmental documentation, and design. MAP-21, includes requirements for planning-level environmental review. Accordingly, this chapter discusses potential environmental mitigation strategies to restore or maintain environmental functions affected by projects. This chapter also summarizes the steps taken by the MPO to consult with federal and state regulatory agencies relative to the plans, inventories, policies, and concerns of those agencies.

A preliminary environmental impact screening can identify potentially serious impacts that could end up stopping a project. Recognizing such issues at the earliest stage of planning provides the opportunity to avoid or mitigate undesirable impacts through modification or elimination of the project. Early "fatal flaw" analysis helps reduce the possibility that subsequent, more detailed analyses will uncover unexpected serious environmental impacts. This approach helps reduce the risks that are inherent in an uncertain planning process, and helps prevent the expenditure of unnecessary time and resources. This chapter details the findings of this analysis in an effort to reduce the likelihood of unexpected environmental impacts and to improve the ability of project-level environmental studies to focus on critical issues.

Environmental Justice

Federal Executive Order 12898 sets out requirements for transportation and Environmental Justice (EJ). The intention is to demonstrate that minority and low-income communities would not be disproportionately affected in an adverse manner under the transportation plan. Environmental Justice requirements also address public involvement, and these requirements are satisfied under the Public Participation Plan and the steps taken for the MTP public involvement effort.

As part of this MTP update, the Greensboro MPO identifies the geographic distribution of low-income and minority populations in order to access the effects of various transportation investments in the plan. The MPO has also identified Low English Proficiency households. This category includes households with persons 14 and over who do not speak English only or very well. A majority of the analysis was based on the 2013 American Community Survey. Based on comments from the Federal Highway Administration, the population groups analyzed were expanded and include African-American, Hispanic, Asian, Native American, and low-income families.

To assess Environmental Justice implications, the plan indicates concentrations of each population group through a series of maps. Additionally, these groups were identified in the environmental screening matrix, and projects were identified that could potentially impact concentrations above the county average for each population group. This is a starting point, rather than a specific impact analysis. A key purpose is to identify projects in the MTP that could have the potential to affect communities of special interest. Any such effects will be assessed in detail during the project development stage.

Based on MPO system-level analysis, no adverse impacts to environmental resources or minority and low-income communities were identified. However, project-level evaluation would be needed to verify possible impacts.

Financial Plan

Federal regulations require a financial plan as an MPO Metropolitan Transportation Plan element. The purpose is to demonstrate that proposed investments are reasonable in the context of reasonably anticipated future revenues over the life of the plan and for future network years (2021, 2030, and 2040). Meeting this test is called “fiscal constraint.”

The 2040 Metropolitan Transportation Plan is fiscally constrained based on analysis of revenues and costs. The transportation investments proposed to meet metropolitan transportation needs over the planning period are consistent with revenue forecasts. The Financial Plan details both proposed investments and revenue forecasts over the life of the plan.

Analysis

The proposed investments were developed by the Greensboro Urban Area MPO in cooperation with NCDOT, GTA, and PART. These investments include roadway, rail, transit, bicycle, and pedestrian facilities and services for the life of this plan. They include existing and committed projects reflected in the Transportation Improvement Program and the City Capital Improvement Programs, and the future plans of the MPO, NCDOT, the City of Greensboro, GTA, and PART. They also reflect needs analysis conducted under the Congestion Management Process, staff review, and public involvement. Roadway maintenance and transit operation and maintenance costs were also forecasted.

The Financial Plan chapter provides an overview of the forecasted cost and revenue assumptions, along with the detailed research results used to derive these values. The following sections provide more detailed assumptions regarding revenue, capital costs, maintenance costs, and future revenue needs.

Revenue Assumptions

Revenue forecasts were developed after a review of previous state and local expenditures, current funding trends, and likely future funding levels. The revenue forecasts involved consultation with NCDOT, GTA, and PART. All dollar figures discussed in this section are presented in year-of-expenditure dollars per FHWA. They are presented in year of expenditure dollars so that they will be fully comparable through time against a constant baseline value (the current year dollar).

2040 MTP Revenue Forecast (In Thousands of Dollars)								
Period	Federal and State Revenues (TIP)		State Maintenance (Roadway)	Local Revenues				
	Highway	Transit		GTA	PART	Powell Bill	Bonds-Maintenance*	Bonds-Capital
2016-2021	334,660	59,070	346,090	144,010	27,900	61,660	11,770	89,850
2022-2030	931,080	138,920	994,440	291,500	66,150	136,670	63,990	386,490
2031-2040	1,401,130	258,520	2,095,130	536,940	124,170	235,700	147,090	437,850
Totals	2,666,870	456,510	3,435,660	972,450	218,220	434,030	222,850	914,190

Cost Assumptions

Cost forecasts were developed after a review of previous state and local expenditures, current trends, and likely future needs. The costs forecasts involved consultation with NCDOT, GTA, and PART. All dollar

figures discussed in this section were initially analyzed in current year dollars to provide a constant baseline value (the current year dollar).

Costs were developed for capital, operation, and maintenance. Capital costs are separated into highway, transit, and non-motorized (bicycle and pedestrian) modes. The costs for each are summarized in the figure below.

2040 MTP Costs Forecast (In Thousands of Dollars)							
Period	Capital			Operating & Maintenance			
	Highway	Transit	Non-Motorized	State Roads	Local Roads	Transit	Totals
2016-2021	267,560	28,110	55,420	346,090	73,440	143,630	914,250
2022-2030	1,251,940	77,000	64,330	994,440	200,660	366,030	2,954,400
2031-2040	1,919,070	146,350	111,970	2,095,130	382,790	711,070	5,366,380
Totals	3,438,570	251,460	231,720	3,435,660	656,890	1,220,730	9,235,030

Planning Assumptions and Air Quality Conformity

Federal and state regulations require air quality to be an important consideration for the MTP. Guilford County was first designated as an air quality non-attainment area in 1992 for 1-hour ozone. An area is designated non-attainment once it does not meet standards set by the Environmental Protection Agency. Once a non-attainment area meets the standards, it is designated attainment; the maintenance classification indicates that the area was once in non-attainment and is still subject to the air quality conformity process. On November 8, 1993, the County was redesignated to maintenance for 1-hour ozone and in April 15, 2008 EPA revoked the 1-hour ozone standard for Guilford County. Effective, April 15, 2009, the Triad Area no longer has to demonstrate conformity for the one-hour ozone (O₃) standard. Federal guidelines currently classify the area as maintenance for fine particulate matter, called PM 2.5.

A key air-quality requirement is a demonstration that the projects in the Metropolitan Transportation Improvement Program (MTIP) and MTP would not cause the area to exceed air-quality standards. The formal name for this process is Air Quality Conformity Determination. The Federal Highway Administration and Piedmont Authority for Regional Transportation (PART), in cooperation with other agencies, facilitate the Conformity Determination process and documentation. The documentation, *Conformity Analysis Report and Conformity Determination for the Triad Area 2035 Long Range Transportation Plan*, will be included in the full MTP document in Appendix A. The conformity analysis concludes that the Greensboro Urban Area Long Range Transportation Plan and 2008-2012 MTIP conforms to the North Carolina PM 2.5 SIP.



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Previously Completed Roadway Projects

2009-2012

Map ID	Funding	TIP or Bond ID	Facility	Description / Extents	Length (miles)
CP-01	Federal	U-4006	Bridford Parkway Extension	Hornaday Rd. to Burnt Poplar Rd. (see Map ID C1) <i>Mitigation & partial construction</i>	1.1
CP-02	Local	PO4160	Hornaday Rd. Extension	Hornaday Rd. to Chimney Rock Rd.	0.6
CP-03	State	U-4750	Hornaday Rd. Bridge	Grade Separation over Greensboro Urban Loop	N/A
CP-04	Federal	U-5162	Lake Jeanette	Widening, intersection improvements, and sidewalks from Lawndale to Bass Chapel/ Elm Street.	1.4
CP-05	Federal	R-2612 A	US 421	Company Mill Rd. and Woody Mill Rd. realignment and interchange	0.0
CP-06	Local	P03880	Merritt Drive	I-40 to High Point Road	
CP-07	Local	P03878	Creek Ridge Road	Rehobeth Church Rd. to Randleman Rd.	1.2
CP-08	Local	P03741	New Garden Road	Jefferson Rd. to Brassfield Rd.	0.8

Recently Completed Roadway Projects

2013-2015

Map ID	Funding	TIP or Bond ID	Facility	Description / Extents	Length (miles)
CP-09	Federal	U-5306D	Battleground Avenue	Intersection and sidewalk improvements at (D) Brassfield Road.	N/A
CP-10	Federal	U-5505	Fleming Road Relocation and Isaacson Boulevard	Roadway & intersection project	0.0
CP-11	Federal	C-5511	Florida St / Randolph Ave	Intersection improvement	N/A
CP-12	Federal	I-5329	Future I-73/Future I-74	South of Ellerbe in Richmond County to I-73/I-85/US 421 in Guilford County (signage)	6.5/ 23
CP-13	Federal	U-4711	Greensboro Signal/ ITS System	Replacement and Expansion	N/A
CP-14	Federal	W-5114	NC 68	East Harrell Rd. to Bartonshire Drive Add left turn lanes at two intersections between East Harrell Road and Bartonshire Drive.	0.4
CP-15	Federal	U-5322	Wendover Avenue	Wendover Avenue/ Clifton Road intersection improvements	N/A
CP-16	Federal	R-2611	West Market Street	Widening, NC 68 to Bunker Hill Rd.	3.6

FIGURE 4-6
Previously Completed Roadway Projects



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Highway Projects Map

Completed Projects

Legend

Existing
Freeway
& Interstate

Roadway
Project Locations

Complete

Interchange
Grade Separation
Project Locations

Interchange
Complete

Grade Separation
Complete

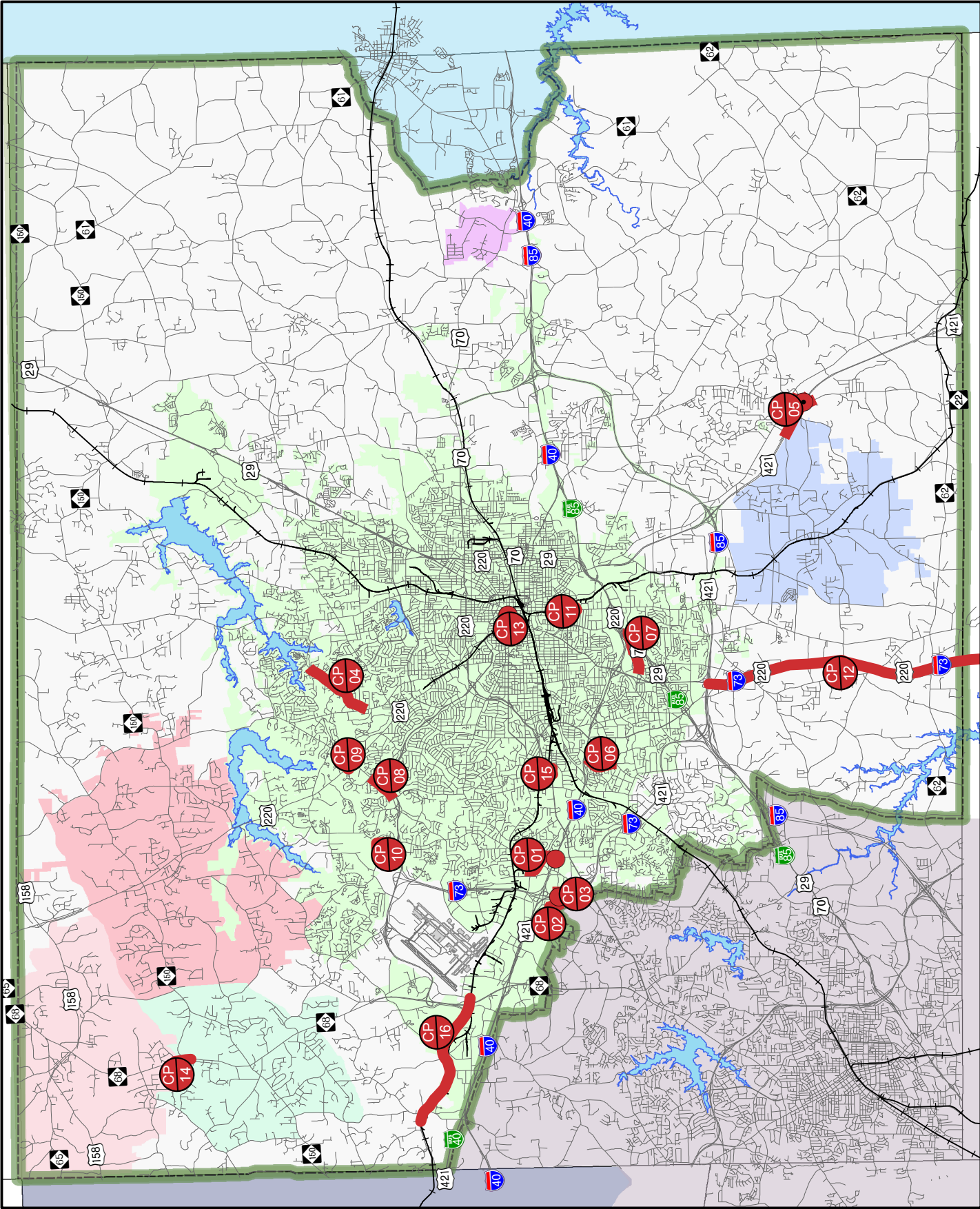
Project Reference ID

CP #
Complete



0 0.5 1 2
Miles

Map 4-4



2016-2021														
Map ID	Funding	TIP or Local ID	Facility	Description / Extents	Length (miles)	Existing # Lanes	Horizon Year # Lanes	Federal Functional Class	BiPed Sidewalk	BiPed Bike	Regionally Significant?	Exempt?	Exemption Category	Project Cost
21-01	Local	P05187	Alamance Church Road	Widening - Martin Luther King Jr. Dr. to City Limits	1.6	2 lane	2 lane divided	Minor Arterial	Yes	Yes	No	No		4,037,760
21-02	Federal	U-5532 A	Aycock Street / Walker Avenue	Intersection & corridor pedestrian safety improvement project	N/A	N/A	N/A	Minor Arterial	Yes	Yes	No	Yes	I26	1,284,430
21-03	Federal	U-5306A	Battleground Avenue	Intersection and sidewalk improvements at Benjamin Parkway/ Cone Boulevard	N/A	N/A	N/A	Other Principal Arterial	Yes	Yes	No	Yes	I27	under construction
21-04	Federal	U-5306B	Battleground Avenue	Intersection and sidewalk improvements at Westridge Road	N/A	N/A	N/A	Other Principal Arterial	Yes	Yes	No	Yes	I27	3,922,490
21-05	Federal	U-5306C	Battleground Avenue	Intersection and sidewalk improvements at New Garden,	N/A	N/A	N/A	Other Principal Arterial	Yes	Yes	No	Yes	I27	right of way in progress
21-06	Local		Battleground/ Benjamin	Intersection improvement for Atlantic and Yadkin Greenway; remove slip lane	N/A	N/A	N/A	Other Principal Arterial	Yes	Yes	No	Yes	I27	253,060
21-07	Local	P04164	Cone-Neatown Extension (PH I)	New location - Existing Cone Blvd. to Nealtown Rd. Extension (includes Nealtown Rd. Extension)	1.1	N/A	2 lane	Minor Arterial	Yes	Yes	No	No		16,634,520
21-08	Federal	U-2525 B	Eastern Urban Loop	US 29 to US 70	12.6	N/A	4 lane freeway	Interstate	No	No	Yes	No		72,819,110
21-09	State	U-5842	Elm Street / Pisgah Church Road	Intersection improvement	N/A	N/A	N/A	Minor Arterial	Yes	Yes	No	Yes	I27	1,176,750
21-10	Local		Elm-Eugene Street	Widening - I-85 to Ritters Lake Rd	0.5	2 lane	4 lane divided	Minor Arterial	No	Yes	No	No		4,269,570
21-11	State	U-5841	Friendly Avenue	Intersection improvements at Lindell Road	N/A	N/A	N/A	Minor Arterial	No	No	No	Yes	I27	294,820
21-12	Federal	U-2412 B	High Point Road	Vickrey Chapel Rd. to Hilltop Rd. (Section A in HPMP)	3.8	3 lane	6 lane divided	Other Principal Arterial	Yes	Yes	Yes	No		under construction
21-13	Local	P05068	High Point Road	Streetscape, Pinckroft to Coliseum Blvd.	1.5	N/A	N/A	Other Principal Arterial	Yes	Yes	No	Yes	I26	10,795,010
21-14	Local		Holden Road / Ashland Drive	Intersection improvements.	N/A	N/A	N/A	Minor Arterial	No	No	No	Yes	I27	126,530
21-15	Federal	EL-5101 DM	Holts Chapel Road Upgrade	C&G and sidewalks - East Market St. to Franklin Blvd.	3.6	2 lane	3 lane	Local	Yes	Yes	No	Yes	I26	4,428,620
21-16	Local	P04945	Horse Pen Creek Road	Widening - New Garden Rd. to Battleground Ave.	3.4	2 lane	4 lane divided	Minor Arterial	Yes	Yes	No	No		36,175,220
21-17	Federal	I-5712	I-40 / Sandy Ridge Road	Interchange Reconfiguration	N/A	N/A	N/A	Interstate	No	No	No	Yes	I27	2,752,070
21-18	State	I-5110	I-73 Connector	New location - NC 68 to Bryan Boulevard (Western Loop) construction	3.0	N/A	6 lane freeway	Interstate	No	No	Yes	No		24,547,190
21-19	Federal	EB-5518	Latham Park Greenway	Greenway improvement on Hill St from Battleground Ave to Mendenhall St	0.2	4 Lane divided	2 lane divided	Local	Yes	Yes	No	Yes	I26	in progress
21-20	Local		Lewisston Road / Fleming Road	Intersection improvements. Construct turning lanes and curb and gutter.	N/A	N/A	N/A	Collector	Yes	No	No	Yes	I27	316,330
21-21	Federal	Y-4807 B	Lowdermilk Street / Sykes Avenue	Intersection Realignment at East Market Street	0.1	2 lane	3 lane	Minor Arterial / Local	Yes	Yes	No	Yes	I27	2,001,730
21-22	Local	EL-5101 DM	Lowdermilk Street Upgrade	C&G and sidewalks - Cameron St. to Holts Chapel Rd.	0.6	2 lane	2 lane	Local	Yes	Yes	No	Yes	I26	Included in funding for project 21-15
21-23	Federal	U-2412 B	Mackay Road	Widening - High Point Rd. to Atwater Drive (part of U-2412B)	0.2	2 lane	5 lane	Collector	Yes	Yes	No	No		Under construction
21-24	Local	P04556	Mackay Road	Widening - Atwater Dr. to Williamsborough Ln.	0.7	2 lane	5 lane	Collector	Yes	Yes	No	No		3,922,490
21-25	Local	McGee Street	McGee Street	Edgeworth Street to Blandwood Avenue. Intersection improvements and reconstruct roadway.	0.1	N/A	N/A	Proposed Collector	Yes	No	No	Yes	I27	316,330
21-26	Local	McGee Street/ Davie Street/ Martin Luther King Jr. (Hamburger Square)	McGee Street/ Davie Street/ Martin Luther King Jr. (Hamburger Square)	Intersection improvements and reconstruct roadway.	N/A	N/A	N/A	Minor Arterial	Yes	Yes	No	Yes	I27	2,214,310
21-27	State	P-5725	NC 150 / NC 68	Intersection improvements and adding crosswalks	N/A	N/A	N/A	Other Principal Arterial	Yes	No	No	Yes	I27	883,190

FIGURE 4-7
2021 Roadway Projects

2016-2021													
Map ID	Funding	TIP or Local ID	Facility	Description / Extents	Length (miles)	Existing # Lanes	Horizon Year # Lanes	Federal Functional Class	BiPed Sidewalk	Regionally Significant?	Exempt?	Exemption Category	Project Cost
21-28	State		NC 62 / Randleman Road	Intersection improvements.	N/A	N/A	N/A	Minor Arterial	No	No	Yes	127	316,330
21-29	State	R-2413 A/B	NC 68 - US 220 Connector	New location - NC 68 to US 220	7.5/12.4	N/A	4 lane freeway	Interstate	No	Yes	No		under construction
21-30	State	R-2413 C	NC 68 -US 220 Connector	Widening - NC 68 / US 220 Intersection to Haw River (In conjunction with R-2309 AB)	3.9/12.4	N/A	4 lane freeway	Interstate	No	Yes	No		under construction
21-31	Federal	P-5204	Piedmont Corridor	Piedmont Corridor. Construct Safety Improvement; grade separation of McLeansville Road	N/A	N/A	N/A	Collector	No	No	Yes	126	under construction
21-32	Local		Pleasant Garden Road	Spur Rd/Nesbitt Rd Roundabout	N/A	N/A	N/A	Mnor Arterial	Yes	No	Yes	126	961,640
21-33	Federal	R-2309 AB	US 220	Widening - Horse Pen Creek Rd. to US 220-NC 68 Connector (In conjunction with R-2413)	6.3	2 lane	4 lane divided	Other Principal Arterial	Yes	Yes	No		under construction
21-34	State		US 29 at NC 150	Exit ramp improvements, convert from partial clover interchange to diamond interchange	N/A	N/A	N/A	Freeway/ Expressway	No	No	Yes	127	683,270
21-35	Federal	R-2612 B	US 421	Neelley Rd. and Williams Dairy Rd. realignment and Interchange	0.6	2 lane	2 lane	Freeway / Expressway & Minor Arterial	No	Yes	No		under construction
21-36	Local	P04500	Vandalla Road	Widening - Elm-Eugene St. to Pleasant Garden Rd.	1.4	2 lane	3 lane	Minor Arterial	Yes	No	No		5,440,870
21-37	Federal	U-5326	West Market Street / Guilford College Road	Intersection Improvements	N/A	5 lane	N/A	Minor Arterial	Yes	No	Yes	127	1,897,980
21-38	Federal	U-2524 C	Western Urban Loop	Bryan Blvd to Battleground Ave		N/A	6 lane freeway	Interstate	No	Yes	No		134,807,090
21-39	State	U-2524 D	Western Urban Loop	Battleground Ave. to Lawndale Dr.	1.5	N/A	6 lane freeway	Interstate	No	Yes	No		82,846,760
21-40	State	U-2524 D	Western Urban Loop	Lake Brandt / Cotswold Connector (Lake Brandt Rd. to Cotswold Rd. part of U-2524 D)	0.3	3 lane	3 lane	Collector	Yes	No	No		right of way in progress
21-41	State	U-2524 AE	Western Urban Loop	Interchange at High Point Rd. Relocation (construction with U-2412B)	N/A	N/A	N/A	Other Principal Arterial	No	Yes	No		under construction
N/A	Various	Various (B)	Various	Bridge Projects	N/A	N/A	N/A	Various		No	Yes	126	N/A
N/A	Various	Various (W, S)	Various	Hazard Elimination Projects	N/A	N/A	N/A	Various		No	Yes	126	N/A
N/A	Various	Various (P)	Various	Passenger Rail Projects	N/A	N/A	N/A	N/A		No	No		N/A
N/A	Various	Various (E)	Various	Enhancement Projects	N/A	N/A	N/A	N/A		No	Yes	126	N/A
N/A	Various	Various (T)	Various	Public Transportation Projects	N/A	N/A	N/A	N/A		No	No		N/A
N/A	Various	Various (C)	Various	Congestion Mitigation and Air Quality (CMAQ) Projects	N/A	N/A	N/A	N/A		No	No		N/A
N/A	Various	Various (C)	Various	Maintenance (roadway)	N/A	N/A	N/A	N/A		No	Yes	126	N/A

FIGURE 4-7
2021 Roadway Projects

Highway Projects Map

2021
Projects

Legend

Existing
Freeway
& Interstate

Roadway
Project Locations

Existing Alignment
Future Alignment

Intersection
Interchange
Grade Separation
Project Locations

Intersection
Interchange
Grade Separation

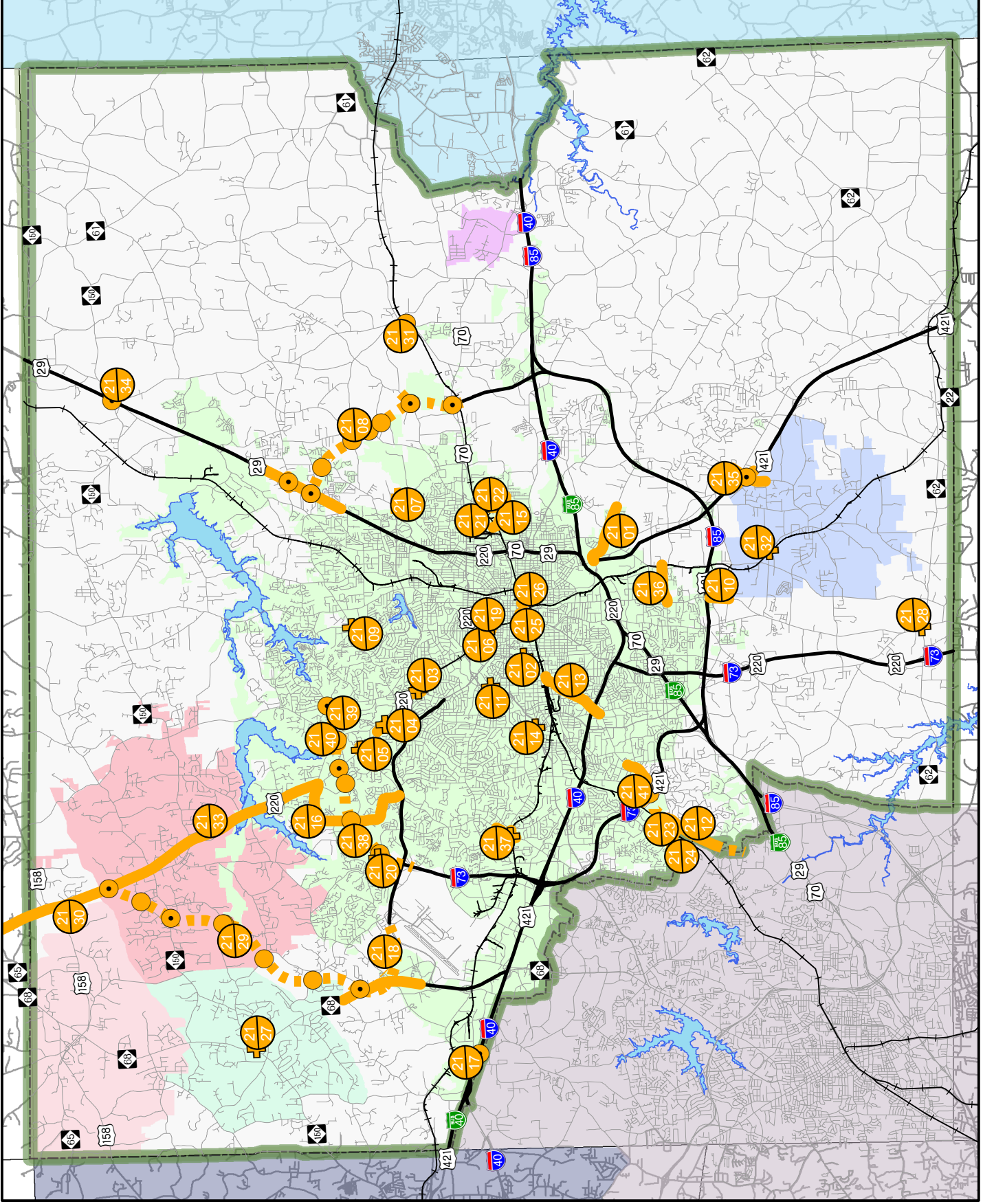
Project Reference ID

2021
#



0 0.5 1 2
Miles

Map 4-5



2022-2030																		Project Costs	
Map ID	Funding	TIP or Local ID	Facility	Description / Extents	Length (miles)	Existing # Lanes	Horizon Year # Lanes	Federal Functional Class	BIPed Sidewalk	Bike Blike	Regionally Significant?	Exempt?	Exemption Category	Project Costs					
30-01	Federal	U-5849	Aycock Street	Railroad overpass replacement & road widening	N/A	3	5	Minor Arterial	Yes	Yes	No	No		3,320,940					
30-02	Federal		Battleground Avenue	Widening - Coswold Ave. to Westridge Road	1.4	5 lane	6 lane divided	Other Principal Arterial	Yes	Yes	Yes	No		23,925,530					
30-03	Local		Battleground Avenue	Widening - Mill Street to Northwood Street	0.2	5 lane	6 lane	Minor Arterial	Yes	No	Yes	No		450,240					
30-04	Federal	U-5852	Benjamin Plevy/ Bryan Blvd	Widening - Holden Road to Wendover Avenue	1.2	5 lane	6 lane	Freeway / Other Principal Arterial	Yes	Yes	Yes	No		24,161,460					
30-05	Local		Benjamin Plevy / Cornwallis Dr	Intersection Improvement	N/A	N/A	N/A	Other Principal Arterial/ Major Collector	Yes	No	No	Yes	127	360,190					
30-06	Local		Bessemer Ave / Elm St	Intersection Improvement	N/A	N/A	N/A	Major Collector/ Minor Arterial	Yes	Yes	No	Yes	127	360,190					
30-07	Local		Bryan Boulevard/New Garden/Horse Pen Creek Road	Interchange Improvements. Design and construct new ramp form westbound New Garden Road to westbound Bryan Boulevard.	N/A	N/A	N/A	Other Freeway	No	No	No	Yes	127	3,601,890					
30-08	Local		Burlington Road	Widening - Franklin Blvd. to Ward Rd.	0.4	2 lane	3 lanes	Minor Arterial	Yes	Yes	No	No		4,815,720					
30-09	State	U-5851	Church Street	Widening - Wendover Ave. to Cone Blvd.	1.8	3 lane	4 lane divided	Collector	Yes	Yes	No	No		28,402,680					
30-10	Local	Bond Project	Church Street	Streetscape, Washington St. to Summit Ave.	0.4	N/A	N/A	Collector	Yes	Yes	No	Yes	126	9,004,720					
30-11	State		Church Street	Add Shoulders - Urban Loop to MPO Boundary (Rockingham County line)	7.2	N/A	N/A	Minor Arterial/ Collector	No	Yes	No	Yes	126	7,780,080					
30-12	Local		Cone Boulevard / Lawndale Drive	Interchange Improvements.	N/A	N/A	N/A	Minor Arterial	Yes	No	No	Yes	127	18,009,440					
30-13	Local		Cone Boulevard Extension (Phase II)	Naltontown Rd. Extension to Hines Chapel Rd. (includes widening of existing and new location)	2.0	2	4 lane divided	Minor Arterial	Yes	Yes	No	No		32,514,230					
30-14	Federal	U-2525 D	Cone Boulevard Extension Interchange	Interchange with I-840/I-785	N/A	N/A	N/A	Interstate	No	No	Yes	No		27,014,150					
30-15	State	U-2525 C	Eastern Urban Loop	Lawndale Dr. to US 29	5.8 / 12.6	N/A	6 lane freeway	Interstate	No	No	Yes	No		305,881,250					
30-16	Local		Elm Street	Widening - Wendover Ave. to Cone Blvd.	1.6	3 lane	4 lane divided	Minor Arterial	Yes	Yes	No	No		22,639,660					
30-17	Local		Fleming Rd / Lewiston Rd Connector	New location - Fleming Rd. to Lewiston Rd.	0.6	N/A	4 lane divided	Collector	Yes	Yes	No	No		27,014,150					
30-18	State	U-2524 F	Fleming /Lewiston Interchange	Interchange with I-840	N/A	N/A	N/A	Interstate	No	No	Yes	No		27,014,150					
30-19	Federal	P-xxxx	Franklin Boulevard	Railroad grade separation	N/A	3 lane	3 lane	N/A	Yes	Yes	No	Yes	126	15,308,020					
30-20	Federal	U-4015 A	Gallimore Dairy Road	NC 68 to south of I-40	1.6	2 lane	4 lane divided	Minor Arterial	Yes	Yes	No	No		14,677,690					
30-21	Local		Hilltop Road	Railroad grade separation	N/A	N/A	N/A	N/A	Yes	Yes	No	Yes	126	27,014,150					
30-22	Local		Huffine Mill Road	Widening - Penny Road to Eastern Urban Loop	1.8	2 lane	4 lane divided	Minor Arterial	Yes	Yes	No	No		39,440,660					
30-23	State		Lake Brandt Road	Add Shoulders - Plainfield Road to Town Limits.	5.5	N/A	N/A	Minor Arterial/ Collector	No	Yes	No	Yes	126	9,905,190					
30-24	Local		Lake Brandt Road/ Air Harbor Road	Intersection Improvement.	0.5	N/A	N/A	Collector	Yes	No	No	Yes	127	9,783,720					
30-25	Federal	U-5812	Lawndale Drive / Pisgah Church Road	Intersection Improvement.	N/A	N/A	N/A	Minor Arterial	Yes	Yes	No	Yes	127	1,674,880					
30-26	Local	Bond Project	Lee Street	Streetscape - Coliseum Boulevard to Eugene St.	1.8	N/A	N/A	Other Principal Arterial	Yes	Yes	No	Yes	126	13,512,480					
30-27	Federal		Lewiston Road / Pleasant Ridge Road	Widening - North of Urban Loop to Summerfield Road	5.0	2 lane	4 lane divided	Collector	Yes	Yes	No	No		49,567,370					
30-28	Local		Mackay Road	Railroad grade separation	N/A	N/A	N/A	N/A	Yes	Yes	No	Yes	126	12,282,430					
30-29	Federal	P-xxxx	Narco Road Extension	New Location - O'Ferral St. to US 70	1.9	N/A	3 lane	N/A	Yes	Yes	No	No		16,748,770					
30-30	State		NC 150	Add Shoulders - Lake Brandt Road to Poley Road.	15.5	N/A	N/A	Major Collector	No	Yes	No	Yes	126	23,232,170					
30-31	State		NC 62	Add Shoulders - Groomstown Road to NC 61	21.5	N/A	N/A	Minor Arterial	No	Yes	No	Yes	126	42,542,790					
30-32	Federal	U-5607	NC 68	Widening - Triad Center Drive to Pleasant Ridge Road	2	4 lane	6 lane divided	Other Principal Arterial	No	No	Yes	No							

FIGURE 4-8
2030 Roadway Projects

Map ID	Funding	TIP or Local ID	Facility	Description / Extents	Length (miles)	Existing # Lanes	Horizon Year # Lanes	Federal Functional Class	BiPed		Regionally Significant?	Exempt?	Exemption Category	Project Costs
									Sidewalk	Bike				
30-33	Federal		Norwalk Street Extension	New location - Existing Norwalk St. to Boston St. (includes RXR grade separation & improvements at Wendover)	0.3	N/A	3 lane	Proposed Collector	Yes	Yes	No	No		12,325,660
30-34	Local		Old Oak Ridge Road	Widening - Muirfield to Pleasant Ridge Road	1.2	2 lane	3 lane	Minor Arterial	Yes	No	No	No		5,402,830
30-35	Local		Pleasant Ridge Road	Widening - West Market St. to NC 68	2.4	2 lane	4 lane divided	Minor Arterial	Yes	Yes	No	No		36,652,800
30-36	State	U-5850	Randleman Road	Widening - Glendale Drive to Elmley Drive	0.6	2 lane	4 lane divided	Minor Arterial	Yes	Yes	No	No		3,886,440
30-37	Local		Sandy Ridge Road	Widening - I-40 to West Market Street	1.0	2 lane	6 lane divided	Collector	Yes	Yes	No	No		37,643,320
30-38	Local		Stanley Road	Widening - Koger Boulevard to Hilltop Road	1.1	2 lane	5 lane	Collector	Yes	Yes	No	No		11,581,870
30-39	Local	Bond Project	Summit Avenue	Streetscape - Murrow Boulevard to Wendover Avenue	1.0	N/A	N/A	Minor Arterial	Yes	Yes	No	Yes	126	18,009,440
30-40	Federal		Tate Street	Railroad grade separation	N/A	N/A	N/A	N/A	Yes	Yes	No	Yes	126	18,009,440
30-41	Federal	I-4921	US 220 (Future I-730/I-74)	Ashboro to I-85; Upgrade to Interstate Standards	6.5/23	N/A	N/A	Freeway/Expressway	Yes	Yes	No	Yes	126	47,400,830
30-42	Federal	R-4707	US 29	Reedy Fork Parkway / US 29 Interchange (includes improvements to Summit Ave. and Reedy Fork Parkway)	0.0	4 lane freeway	4 lane freeway	Freeway/Expressway	Yes	Yes	Yes	No		79,464,830
30-43	Federal	U-5754	US 29/ US 70/US 220	Widen southbound exit ramp to two lanes; with northbound on ramp to two lanes and replace I-40/ I-85 Bus overpass.	0.5	1 lane	2 lanes	Freeway/Expressway	No	No	Yes	No		30,731,300
30-44	Federal	R-2910	US 70	Widening - Rock Creek Dairy Road to MPO Boundary (remaining portion in Burlington-Graham MPO)	0.32 / 5.4	2 lane	4 lane divided	Other Principal Arterial	Yes	Yes	Yes	No		2,247,580
30-45	Federal	U-2581 B	US 70	Widening - Mt Hope Church Rd. to Rock Creek Dairy Rd.	5.2	2 lane	4 lane divided	Other Principal Arterial	Yes	Yes	Yes	No		39,980,950
30-46	State		Yanceyville Road	Add Shoulders - Lees Chapel Road to NC 150	3.0	N/A	N/A	Collector	No	Yes	No	Yes	126	3,241,700
30-47	Local		Yanceyville Road	Widening - Lees Chapel to Urban Loop Interchange	0.1	2 lane	4 lane divided	Collector	Yes	Yes	No	No		1,350,710
30-48	State		Youngs Mill / Southeast School Connector	New location - Millpoint Rd. to Southeast School Rd.	1.2	N/A	2 lane	Collector	Yes	Yes	No	No		36,249,390
N/A	Various	Various (B)	Various	Bridge Projects	N/A	N/A	N/A	Various			No	Yes	126	N/A
N/A	Various	Various (W, S)	Various	Hazard Elimination Projects	N/A	N/A	N/A	Various			No	Yes	126	N/A
N/A	Various	Various (P)	Various	Passenger Rail Projects	N/A	N/A	N/A	N/A			No	No		N/A
N/A	Various	Various (E)	Various	Enhancement Projects	N/A	N/A	N/A	N/A			No	Yes	126	N/A
N/A	Various	Various (T)	Various	Public Transportation Projects	N/A	N/A	N/A	N/A			No	No		N/A
N/A	Various	Various (C)	Various	Congestion Mitigation and Air Quality (CMAQ) Projects	N/A	N/A	N/A	N/A			No	No		N/A
N/A	Various	Various (C)	Various	Maintenance (roadway)	N/A	N/A	N/A	N/A			No	Yes	126	N/A

FIGURE 4-8
2030 Roadway Projects

Highway Projects Map

2030
Projects

Legend

Existing
Freeway
& Interstate

Roadway

Project Locations

Existing Alignment
Future Alignment

Intersection

Interchange

Grade Separation

Project Locations

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Grade Separation

Project Reference ID

30

#

2030



0 0.5 1 2
Miles

Map 4-6

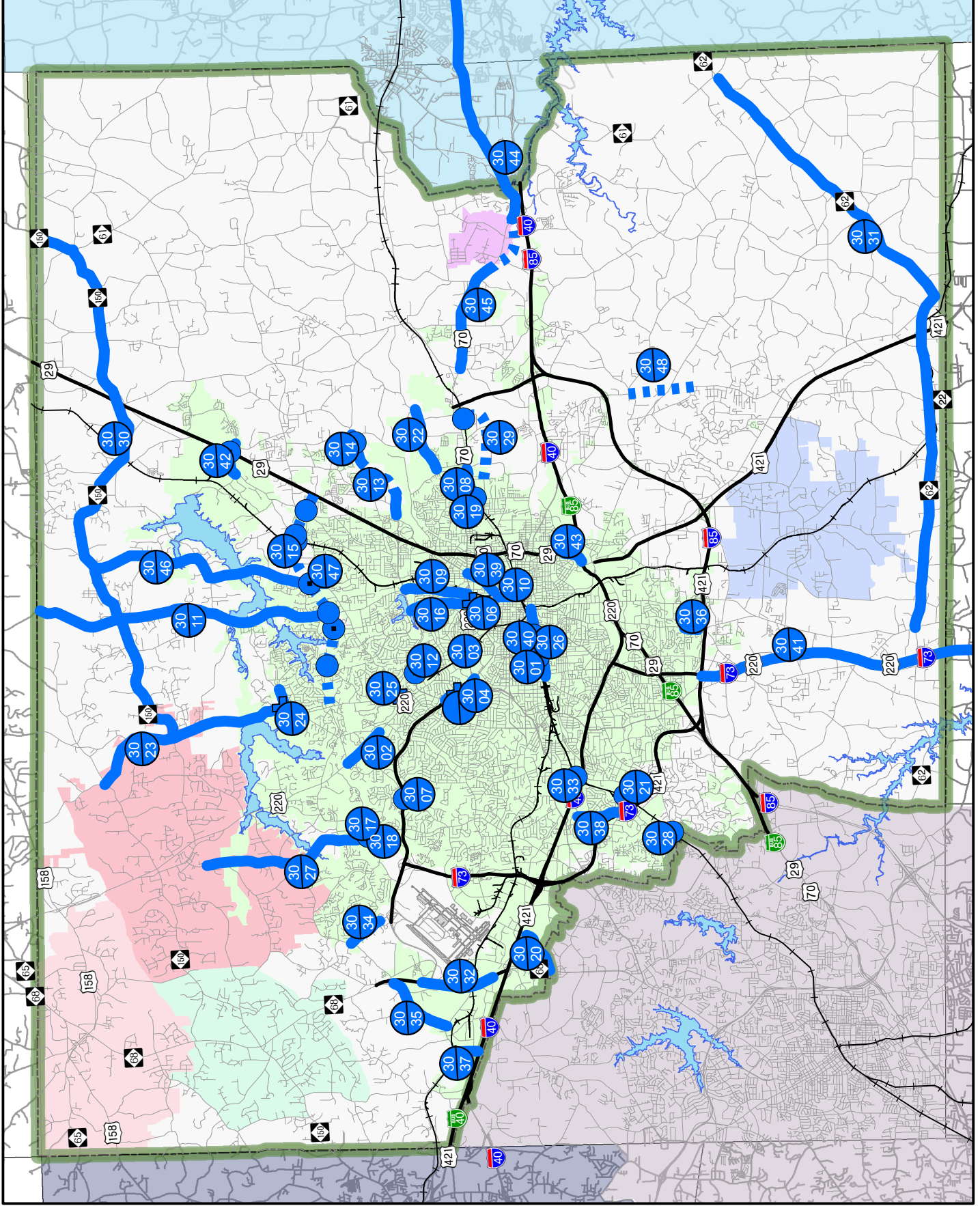


FIGURE 4-9
2040 Roadway Projects

2031-2040														
Map ID	Funding	TIP or Local ID	Facility	Description / Extents	Length (miles)	Existing # Lanes	Horizon Year # Lanes	Federal Functional Class	BiPed		Regionally Significant?	Exempt?	Exemption Category	Project Costs
									Sidewalk	Bike				
40-01	Local		Alamance Church Road	Widening - City Limits to I-85	1.2	2 lane	3 lane divided	Minor Arterial	Yes	Yes	No	No		8,733,280
40-02	Local		Bass Chapel Rd / Elm St	Widening - Air Harbor Rd. to Old Lake Jeanette Rd.	2.0	3 lane	4 lane divided	Collector	Yes	Yes	No	No		41,083,200
40-03	Federal		Battleground Avenue Crossover	Reconstruction - Cornwalls Dr. to Northwood Street	1.0	5 lane	6 lane divided	Other Principal Arterial	Yes	No	Yes	No		39,987,540
40-04	Federal		Benbow Road	Railroad grade separation	N/A	N/A	N/A	N/A	Yes	Yes	No	Yes	126	9,996,890
40-05	Local		Burnt Poplar Road	Widening - Swing Rd. to Regional Rd.	2.9	2 lane	3 lane	Local	Yes	Yes	No	No		31,046,200
40-06	Local		Church Street	Widening - Cone Blvd. to Old Lake Jeanette Road	2.2	3 lane	4 lane divided - 5	Collector	Yes	Yes	No	No		36,288,700
40-07	State		Clapps Farm Road	Widening - McConnell Rd. to Mt. Hope Church Rd.	2.0	N/A	4 lane divided	Local	Yes	Yes	No	No		35,498,280
40-08	Federal		East Market Street	Railroad underpass replacement	N/A	N/A	N/A	N/A	Yes	Yes	No	Yes	126	79,975,090
40-09	Federal		Hamburg Mill	Add shoulder, US 220 to Pleasant Ridge Road	1.4	N/A	N/A	Local	No	Yes	No	Yes	126	839,740
40-10	Local		Hicone Road	Widening - Summit Ave. to Hines Chapel Rd.	3.3	2 lane	5 lane	Minor Arterial	Yes	Yes	No	No		42,975,950
40-11	Local		Hicone Road Extension	New location - Existing Hicone Rd. to Lee's Chapel Rd.	0.6	N/A	3 lane	Minor Arterial	Yes	Yes	No	No		7,714,930
40-12	Local		Holts Chapel Road Extension	Widening & New Location - Franklin Blvd. to Naco Rd Extension	2.3	2 lane / N/A	3 lane	Collector	No	Yes	No	No		42,376,130
40-13	State		McConnell Road	Widening - Beaumont Ave to I-40	1.6	N/A	4 lane divided	Collector	Yes	Yes	No	No		54,497,690
40-14	Federal		NC 68	Widening - Leaborn Rd. to Rockingham County Line	8.9	2	4 lane divided	Other Principal Arterial	No	No	Yes	No		53,316,730
40-15	Federal		NC 68 / I-40	Interchange Reconfiguration	N/A	N/A	N/A	Minor Arterial	No	No	No	Yes	127	69,181,120
40-16	Federal		NC 150	Add Shoulders - Town Limits to US 220; US 220 to Eversfield Road.	7.5	2 lane	3 lane	Minor Arterial/ Major Collector	No	Yes	No	Yes	126	148,151,190
40-17	Local		Nealtown Road Extension	New location - East Cone Blvd. to McKnight Mill Rd.	2.0	N/A	3 lane	Proposed Collector	Yes	Yes	No	No		34,074,720
40-18	State	U-5003	Pegg / Thatcher Connector	Widening - Gallimore Dairy Rd. to Market St. (includes grade separation over I-40)	2.1	N/A	4 lane divided	Collector	Yes	Yes	No	No		93,845,440
40-19	State		Pleasant Ridge Road	Widening - Old Oak Ridge Rd. to Lewiston Rd.	3.2	2 lane	3 lane	Minor Arterial	Yes	Yes	No	No		40,510,050
40-20	Local		Pleasant Ridge Road	Widening - NC 68 to Old Oak Ridge Rd.	1.0	2 lane	4 lane divided	Minor Arterial	Yes	Yes	No	No		20,209,710
40-21	Federal		Pleasant Ridge Road / Summerfield Road	Intersection Improvement. Construct Roundabout.	N/A	N/A	N/A	Minor Arterial	Yes	Yes	No	Yes	126	1,999,380
40-22	Federal		Sandy Ridge Road Extension	New location - West Market St. to Marshall Smith Road	1.9	N/A	4 lane divided	Minor Arterial	Yes	Yes	No	No		46,918,720
40-23	Federal		South Dudley Street	Railroad grade separation	N/A	N/A	N/A	N/A	No	No	No	Yes	126	39,987,540
40-24	Federal		South English Street	Railroad grade separation	N/A	N/A	N/A	N/A	No	No	No	Yes	126	39,987,540
40-25	Local		Summit Avenue	Widening - McKnight Mill Rd. to Bryan Park Rd.	4.7	2 lane	4 lane divided	Minor Arterial	Yes	Yes	No	No		82,225,060
40-26	Federal		US 29	Upgrade to Interstate Standards. S. of Reedy Fork Parkway to Rockingham Co. line	5.5	4 lane freeway	6 lane freeway	Freeway / Expressway	No	No	Yes	No		23,518,010
40-27	State	R-2577 C	US 158	Widening & new location - Anthony Rd to US 220 (includes Bypass, A & B Sections in Winston-Salem MPO)	6.8 / 18.8	2 lane	4 lane divided	Other Principal Arterial	Yes	Yes	Yes	No		80,508,260
40-28	State	R-2580	US 158	Widening - US 220 to Rockingham Co Line (remaining portion in Rockingham Co.)	1.6 / 15	2 lane	4 lane divided	Other Principal Arterial	Yes	Yes	Yes	No		80,508,260
40-29	State		Vandala Road Extension	New location - Pleasant Garden Rd. to Alamance Church Rd. includes interchange with JM Hunt Jr Expressway	2.5	N/A	4 lane divided	Minor Arterial	Yes	Yes	No	No		73,663,190
40-30	Federal		Wendover Avenue / I-40	Interchange Reconfiguration	N/A	N/A	N/A	Other Principal Arterial	No	No	No	Yes	127	53,316,730
40-31	Federal	U-3617	West Market Street (E. Mountain Street)	Widening - Bunker Hill Road to Forsyth County Line	1.5 / 3/6	2 lane	4 lane divided	Minor Arterial	Yes	Yes	No	No		35,274,350
40-32	State		Wiley Davis Road	Widening - Groometown Road to Clair Place	1.0	2 lane	4 lane divided	Minor Arterial	No	No	No	No		18,287,640
40-33	State		Williams Dairy Road/ Millpoint Road Connector	New location - Millpoint Rd. to Southeast School Rd.	0.8	N/A	2 lane	Collector	Yes	Yes	No	No		8,754,610
40-34	State		Youngs Mill Rd. Extension	New location - McConnell Rd. to US 70 (includes Railroad Grade Separation)	1.0	N/A	4 lane divided	Collector	Yes	Yes	No	No		114,537,660
N/A	Various	Various (B)	Various	Bridge Projects	N/A	N/A	N/A	Various			N/A	Yes	126	N/A
N/A	Various	Various (W, S)	Various	Hazard Elimination Projects	N/A	N/A	N/A	Various			N/A	Yes	126	N/A
N/A	Various	Various (P)	Various	Passenger Rail Projects	N/A	N/A	N/A	N/A			N/A	No		N/A
N/A	Various	Various (E)	Various	Enhancement Projects	N/A	N/A	N/A	N/A			N/A	Yes	126	N/A
N/A	Various	Various (T)	Various	Public Transportation Projects	N/A	N/A	N/A	N/A			N/A	No		N/A
N/A	Various	Various (C)	Various	Congestion Mitigation and Air Quality (CMAQ) Projects	N/A	N/A	N/A	N/A			N/A	No		N/A
N/A	Various	Various (C)	Various	Maintenance (roadway)	N/A	N/A	N/A	N/A			N/A	Yes	126	N/A

Highway Projects Map

2040
Projects

Legend

Existing
Freeway
& Interstate

Roadway
Project Locations

Existing Alignment
Future Alignment

Intersection
Interchange

Grade Separation
Project Locations

Intersection
Interchange
Grade Separation

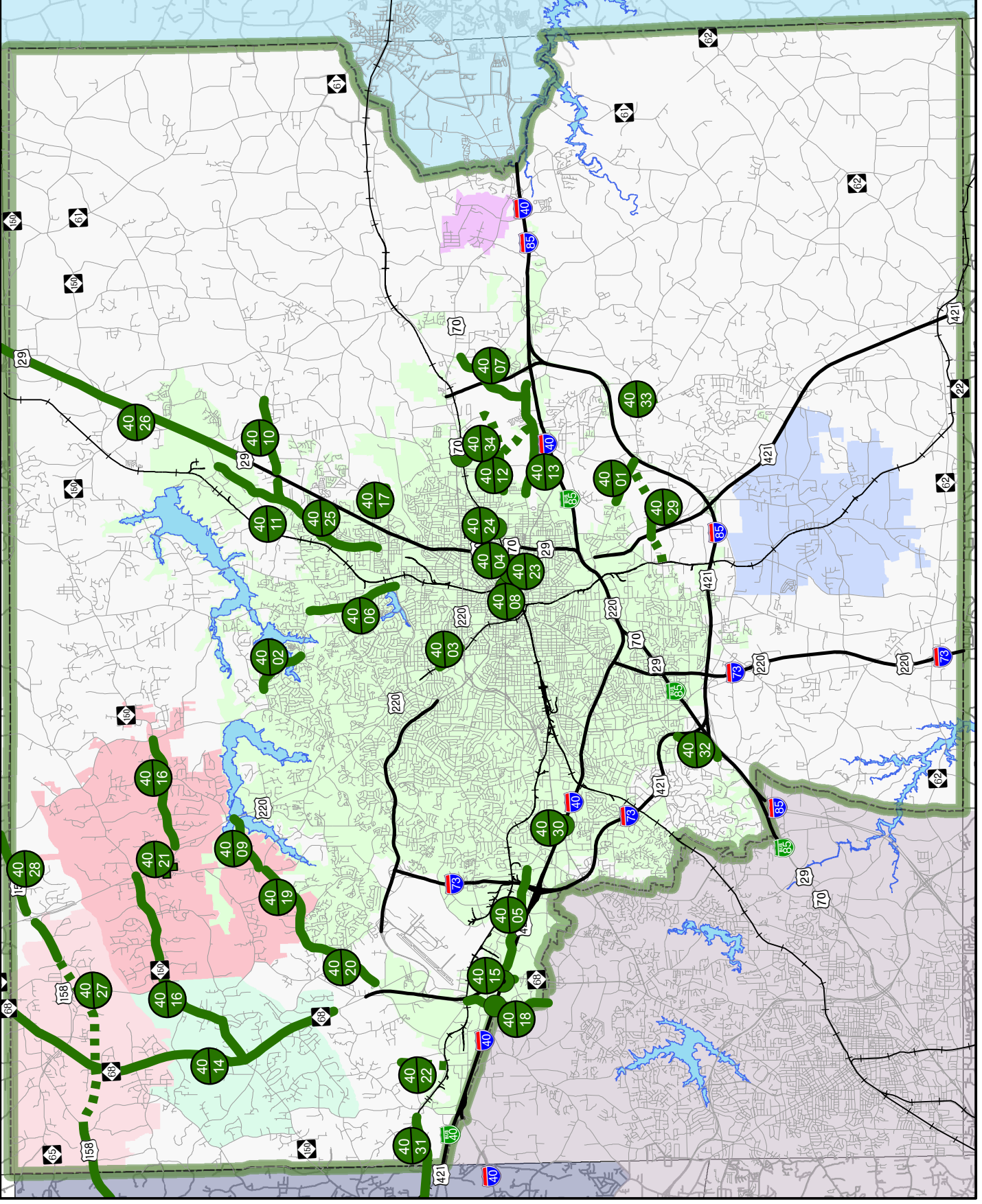
Project Reference ID

40
#



0 0.5 1 2
Miles

Map 4-7



Beyond 2040											
Map ID	Funding	TIP or Local ID	Facility	Description / Extents	Length (miles)	Existing # Lanes	Horizon Year # Lanes	Federal Functional Class	BiPed		Estimated Project Costs
									Sidewalk	Bike	
IL-01	Federal	I-4924	Airport Connector (I-73/I-74)	New location - Forsyth Co. Line to NC 68	4.8	N/A	4 lane divided	Other Principal Arterial	No	No	\$39,600,000
IL-02	State		Bishops Rd. / Vernondale Rd. Connector	South Holden Rd. to Rehobeth Church Rd.	0.5	2 lane	3 lane	Collector	Yes	Yes	\$4,424,200
IL-03	Federal		Brown Summit Road at US 29	Summit Ave. to Brangu St. and Interchange	N/A	N/A	4 lane divided	Minor Arterial	Yes	No	\$35,237,000
IL-04	State		Burnetts Chapel / Steeple Chase / Hagen Stone Park Connector	Burnetts Chapel Rd. to Steeple Chase Rd.; Steeple Chase Rd. to Hagan Stone Park Rd.; Hagan Stone Park Rd. to Company Mill Rd.	5.2	2 lane	2 lane	Proposed Minor Arterial	Yes	Yes	\$35,225,000
IL-05	Federal		Carmon Road Extension	Knox Rd. to McLeansville Rd.	1.0	N/A	2 lane	Collector	Yes	No	4,200,000
IL-06	State		Eversfield Road Extension	New location - Oak Ridge Rd. to Brookbank Rd.	1.4	N/A	2 lane	Proposed Collector	Yes	Yes	\$5,599,000
IL-07	State		High Rock Road Extension	US 70 to Frieden Church Rd. (improve existing and new location)	3.1	2 lane	2 lane	Collector	Yes	Yes	\$20,402,000
IL-08	State		South Holden Road	Widening & new location - Glendale Drive to Kivett Road	2.6	2 lane	4 lane divided	Minor Arterial	Yes	Yes	\$20,177,000
IL-09	State		Mt. Hope Church Rd. Extension	New location - McPherson-Clay Rd. to Alamance Church Rd.	0.4	N/A	2 lane	Collector	Yes	Yes	\$1,497,000
IL-10	Local		Rankin Mill Rd. / Flemingfield Rd. Connector	New location - South of Keeley Rd. to Huffine Mill Rd.	0.7	2 lane	3 lane	Minor Arterial	Yes	Yes	\$4,069,000
IL-11	State		Ritters Lake Road Extension	New location - Elm-Eugene St. to Randleman Rd.	0.4	2 lane	3 lane	Minor Arterial	Yes	Yes	\$4,817,000
IL-12	State		Turner Smith Road Extension	New location - McLeansville Rd. eastward to Existing Turner Smith Rd.	0.5	N/A	3 lane	Proposed Collector	Yes	Yes	\$3,409,000
Beyond 2040											
Map ID	Funding	TIP or Local ID	Facility	Description / Extents	Length (miles)	Existing # Lanes	Horizon Year # Lanes	Federal Functional Class	BiPed		Project Costs
									Sidewalk	Bike	
N/A	Various	Various (T)	Various	Public Transportation Projects	N/A	N/A	N/A	N/A			N/A

FIGURE 4-10
Illustrative Roadway Projects

Highway Projects Map

Illustrative Projects

Legend

Existing
Freeway
& Interstate

Roadway Project Locations

Existing

Proposed

Interchange Grade Separation Project Locations

Interchange
Complete

Grade Separation
Complete

Project Reference ID

IL #

Illustrative



0 0.5 1 2
Miles

Map 4-8

